

AMENDMENT AND RESPONSE UNDER 37 CFR § 1.111

Serial Number: 09/748,165

Filing Date: December 27, 2000

Title: SYSTEMS, METHODS, AND APPARATUS FOR SINGLE INSTRUCTION MULTIPLE DATA MANAGEMENT INCLUDING COMBINED ARITHMETIC FLAGS (As Amended)

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Dkt: 884-A96US1**REMARKS**

This responds to the Office Action mailed on April 15, 2008.

Claims 5, 10, 15, and 17-19 have been canceled by way of this amendment. Claims 1, 7, 11, 12, 16, and 23 have been amended. No claims are added. Thus, claims 1-4, 6-9, 11-14, 16, and 23-25 are now pending.

For the convenience of the Examiner, Applicant's remarks concerning the claims will be presented in the same order in which the Examiner presented them in the Office Action.

Objection to the Specification

The Examiner objected to the title of the application as not being descriptive. The title has been amended in order to make the title more descriptive and to more accurately reflect the content of the independent claims. It is believed that the amendment made herein to the title obviates said objection. Therefore, Applicant respectfully requests notification that the objection to the title is withdrawn.

Objection to the Claims

Claim 12 was objected to due to informalities. It is believed that the amendment made herein to claim 12 obviates said objection.

Amendments to Claims 1, 7, 11, 12, 16, and 23

Claims 1, 7, 11, 12, 16, and 23 have been amended. No new matter has been introduced.

Independent claim 1 has been amended by substituting "words of N bits" for "an N-bit word"; by substituting "one of the N-bit words" for "a word"; and by inserting the phrase "wherein, in combining, the combination function module performs an OR operation". Support for this language may be found, for example, in claim 5 of the original disclosure.

Independent claim 7 has been amended by inserting the phrase "and wherein the function comprises an OR operation". Support for this language may be found, for example, in claim 10 of the original disclosure.

Claim 11 has been amended to depend from claim 7.

Independent claim 12 has been amended by inserting commas before and after “when executed by a processor”; and by inserting the phrase “and wherein the function comprises an OR operation”. Support for this language may be found, for example, in claim 15 of the original disclosure.

Claim 16 has been amended to depend from claim 12.

Independent claim 23 has been amended by substituting “words of N bits” for “an N-bit word”; by substituting “one of the N-bit words” for “a word”; and by inserting the phrase “wherein, in combining, the combination function module performs an OR operation”. Support for this language may be found, for example, in claims 5, 10, and 15 of the original disclosure.

Rejections Under 35 U.S.C. §112, Second Paragraph

Claims 1-6 and 23-25 were rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention.

The Examiner stated that the limitation of “a word” in independent claims 1 and 23 lacked a proper antecedent. Accordingly, independent claims 1 and 23 have each been amended to substitute “words of N bits” for “an N-bit word”, and by substituting “one of the N-bit words” for “a word”. Applicant believes that claims 1, 23, and their respective dependent claims are now in compliance with 35 U.S.C. §112, second paragraph.

For the above reasons, Applicant respectfully requests that the rejection of claims 1-6 and 23-25 under 35 U.S.C. §112, second paragraph, be withdrawn.

Rejection of Claims 1-4, 6-9, 17-19 and 23 Under 35 U.S.C. §102(e) as Anticipated by Wilson

Claims 1-4, 6-9, 17-19 and 23 were rejected under 35 U.S.C. §102(e) as being anticipated by Wilson (U.S. 6,530,012). Applicant does not admit that Wilson is prior art and reserves the right to swear behind Wilson as provided for under 37 C.F.R. §1.131.

As indicated earlier, claims 17-19 have been canceled, leaving claims 1-4, 6-9, and 23 subject to this rejection.

The rule under 35 U.S.C. §102 is well settled that “A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2D 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). MPEP §2131.

Wilson does not appear to disclose all of the elements recited in independent claims 1, 7, and 23.

Regarding claim 1, as amended, Wilson does not appear to disclose *inter alia* a combination function module to examine one of the N-bit words comprising a plurality of sets of arithmetic flags, to determine a data item field size for the word, and based on the determination of the data item field size to logically combine the plurality of arithmetic flags of the sets within the word into a single combined arithmetic flag variable of M bits, wherein, in combining, the combination function module performs an OR operation.

As best understood, Wilson discloses a condition code register wherein a code generator generates condition codes by considering the results of addition operations carried out on each packed object in the source register. Applicant vigorously asserts that there is no teaching in Wilson of logically combining any of these generated results with any other of the results, as in Applicant’s independent claims, which recite logically combining a plurality of arithmetic flags into a single combined arithmetic flag variable. Applicant was also unable to find any reference in Wilson to a logical combination. Similarly, Applicant was unable to find any reference to an OR operation in Wilson. Applicant believes that independent claims 7 and 23 should be found allowable for similar reasons.

Regarding independent claim 7, as amended, Wilson does not appear to disclose, for example, logically combining the plurality of arithmetic flags based on a function selected when a combination process is selected, wherein the function comprises an OR operation.

Regarding independent claim 23, Wilson does not appear to disclose, for example, a combination function module to examine one of the N-bit words comprising a plurality of sets of arithmetic flags, to determine a data item field size for the word, and based on the determination of the data item field size to logically combine the plurality of arithmetic flags of the sets within the word into a single combined arithmetic flag variable of M bits, wherein, in combining, the combination function module performs an OR operation; and wherein the plurality of arithmetic

flags represent a result status of the plurality of data items after a mathematical operation is performed by a processor on the plurality of data items.

For the above reasons, independent claims 1, 7, and 23 should be found to be allowable over Wilson, and Applicant respectfully requests that the rejection of claims 1, 7, and 23 under 35 U.S.C. §102(e) as anticipated by Wilson be withdrawn.

Claims 2-4 and 6, which depend from claim 1 and incorporate all of the limitations therein, are also asserted to be allowable for the reasons presented above.

Claims 8, 9, and 11, which depend directly or indirectly from claim 7 and incorporate all of the limitations therein, are also asserted to be allowable for the reasons presented above.

Claim 24 and 25, which depend from claim 23 and incorporate all of the limitations therein, are also asserted to be allowable for the reasons presented above.

Rejection of Claims 5, 10, 11, 15, and 16

Under 35 U.S.C. §103(a) as Unpatentable over Wilson in view of Bindloss

Claims 5, 10, 11, 15, and 16 were rejected under 35 USC § 103(a) as being unpatentable over Wilson in view of Bindloss et al. (U.S. 5,778,241).

As noted earlier, claims 5, 10, and 15 have been canceled, leaving only claims 11 and 16 subject to this rejection.

To establish a *prima facie* case of obviousness under 35 U.S.C. §103, the prior art reference (or references when combined) must teach or suggest every limitation of the claim. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA, 1974). MPEP §2143.

As asserted in Applicant's response to the §102 rejection above, Wilson fails to disclose all of the elements recited in independent claim 7, as currently amended. Nor does the addition of Bindloss disclose, teach, or suggest the missing claim element.

If an independent claim is nonobvious under 35 U.S.C. §103, then any claim depending therefrom is nonobvious. MPEP §2143.03.

Claim 11, which is dependent from claim 7, includes all of the elements of claim 7, and it is therefore patentable over Wilson for at least the same reasons as stated above for claim 7.

Bindloss does not supply the elements of claim 7 that are missing from Wilson. Thus, the

proposed combination of Wilson and Bindloss fails to teach or suggest each of the elements included in claim 11.

Claim 16 is dependent from claim 12. Regarding independent claim 12, as amended, Wilson does not appear to disclose, for example, logically combining the plurality of arithmetic flags based on a function selected when a combination process is selected, wherein the function comprises an OR operation, and storing a result of the combining of the plurality of arithmetic flags in a destination register for access by the processor.

Applicant vigorously asserts that there is no teaching in Wilson of logically combining a plurality of arithmetic flags. Applicant was also unable to find any reference in Wilson to an OR operation.

Bindloss does not supply the elements of claim 12 that are missing from Wilson. Thus, the proposed combination of Wilson and Bindloss fails to teach or suggest each of the elements included in claim 16.

For the above reasons, claims 11 and 16 should be found to be allowable over any combination of Wilson and Bindloss, and Applicant respectfully requests that the rejection of claims 11 and 16 under 35 U.S.C. §103(a) as unpatentable over Wilson in view of Bindloss be withdrawn.

Rejection of Claims 24 and 25 under 35 U.S.C. §103(a)
As Unpatentable over Wilson in view of “Examiner’s taking of Official Notice”

Claims 24 and 25 were rejected under 35 USC § 103(a) as being unpatentable over Wilson in view of the “Examiner’s taking of Official Notice.”

Claims 24 and 25, which are dependent from claim 23, include all elements of claim 23, as amended, and are therefore patentable over Wilson for at least the same reasons as stated above for claim 23. The combination of Wilson and the “Examiner’s taking of Official Notice” fails to supply the elements of claims 24 and 25 that are missing from Wilson. Therefore, the proposed combination of Wilson and the “Examiner’s taking of Official Notice” fails to teach or suggest each of the elements included in claim 24 and 25.

For the above reasons, claims 24 and 25 should be found to be allowable over any combination of Wilson and the “Examiner’s taking of Official Notice”, and Applicant

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respectfully requests that the rejection of claims 24 and 25 under 35 U.S.C. §103(a) as unpatentable over Wilson in view of the “Examiner’s taking of Official Notice” be withdrawn.

Additional Elements and Limitations

Applicant considers additional elements and limitations of the claims to further distinguish over the cited references, and Applicant reserves the right to present arguments to this effect at a later date.

Conclusion

Applicant respectfully submits that claims 1-4, 6-9, 11-14, 16, and 23-25 are in condition for allowance, and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant’s attorney, Ann M. McCrackin (located in Minneapolis, Minnesota) at (612) 349-9592 or Applicant’s below-signed attorney (located in Phoenix, Arizona) to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

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